



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

SWA10A-3-OH
Job Sheet 171616



Part No: SWA10A-3-OH

Job Qty: 1 ea

Part Name: Electric Swivel 10,000 lb Safe Work Load (4,536 kg)



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 2/5/18

Job Tracking No:

Due Date: 2/16/18

Created By: Marie Lajeunesse

Type: Stock

Description: RA176/2856

Note: SWA10A rev.3 IPP REV:A 18.02.01 NEW ISSUE DD VERF:DP

Ship Via:

SN M967-01

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Start up Operation	1 Ea		2/15/18	0.00	0.00	Start Up Small Fab-4		
110	Small Fab	1 pcs		2/15/18	0.00	1.00	Small Fab-9		
120	QC	1 pcs		2/15/18	0.00	0.00	QC5		
130	Customer Acceptance	1 pcs		2/15/18	0.00	0.00			
140	Outsource	1 pcs		2/15/18	0.00	0.00			
150	Packaging	1 pcs		2/15/18	0.00	0.00	Packaging2		
160	QC	1 pcs		2/15/18	0.00	0.00	QC6		
170	Small Fab	1 pcs		2/16/18	0.00	1.00	Small Fab-9		
180	QC	1 pcs		2/16/18	0.00	0.00	QC5		
185	DC	1 pcs		2/16/18	0.00	0.00	DC		
190	Packaging	1 pcs		2/16/18	0.00	0.00	Packaging3-2		
200	QC21-FG	1 Ea		2/16/18	0.00	0.00	QC21		

Part Op 110 - TEST ASSEMBLY. DISASSEMBLE ASSEMBLY. INSPECT DAMAGE PART.

Descriptions: 170 - RE-ASSEMBLE. ***All assembly to be done in accordance with manual*** TEST ASSEMBLY.

185 - Photocopy blue file and create labels

7-6-6LB GREASE BATCH: 7364709036 / LOCITE 620 : M138764
LOCITE 242 : M138762

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
SWA10A-3-AR	Electric Swivel 10,000 lb Safe Work Load (4,536 Kg)	1 pcs (1 ea)	100-Start up Operation	
188-FPSS-1032-5/8	Set Screw	1 Ea (1 ea)	170-Small Fab	5037083
188-FSCS-1032-5/8	Wire Clamp Screw	4 Ea (4 ea)	170-Small Fab	5037242
C10-28	Swivel Bushing, C10/SWA10	1 Ea (1 ea)	170-Small Fab	5033023
EL-PLUG-F	3-Prong Female Spade Plug	1 Ea (1 ea)	170-Small Fab	
EL-PLUG-M	3-Prong Male Spade Plug	1 Ea (1 ea)	170-Small Fab	
EL314-SJTOW	3 Wire	6 ft (6 ea)	170-Small Fab	5029542
SWA10A-100	Lower End	1 Ea (1 ea)	170-Small Fab	
SWA10A-1100	Upper DU Bearing	1 Ea (1 ea)	170-Small Fab	5040726
SWA10A-1200	Lower DU Bearing	1 Ea (1 ea)	170-Small Fab	5036190
SWA10A-1300	Roller Thrust Bearing	1 Ea (1 ea)	170-Small Fab	5047196
SWA10A-1400	Circlip	1 Ea (1 ea)	170-Small Fab	5036191
SWA10A-1800	Cover	1 Ea (1 ea)	170-Small Fab	
SWA10A-200	Upper End Swivel	1 Ea (1 ea)	170-Small Fab	
SWA10A-300	Bearing Housing	1 Ea (1 ea)	170-Small Fab	
SWA10A-400	Thrust Washer	1 Ea (1 ea)	170-Small Fab	5049928

5047603

5049571

Plex 2/5/18 4:08 PM Dart.lajeunesse.marie

SWAGA 1800 THERMAL
7856 K75 SHRINK TUBE 1/4

PARTS USED TO OVERHAUL

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																																																							
Date : _____		Step #: _____		MRB (QSI042) Approval _____																																																																																					
Description V		Job No: 171616 Start up Operation 02/06/18																																																																																							
SWA10A-3 Original Serial #: S039495 OH Revision: Operation: Change No:		Electric Swivel 10,000 lb Safe Work Load (4,536 kg) 																																																																																							
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		Lead hand / Supervisor Approval Verification																																																																																							
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		OTHER :																																																																																							

SWA10A-500 ✓	Semi-Rings	1 Ea (1 ea)	170-Small Fab
SWA10A-600 ✓	Collar	1 Ea (1 ea)	170-Small Fab
SWA10A-700	Wire Clamp	2 Ea (2 ea)	170-Small Fab E
SWA6A-1900	1/4" Female Spade Connector	6 Ea (6 ea)	170-Small Fab
SWA6A-800B P	Connector Bushing	1 Ea (1 ea)	170-Small Fab
SWA6A-900B	Rotary Contact	1 (1 ea)	170-Small Fab

5047603
5029420
5049653

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Start up Operation	SWA10A-3	1	0	0
170-Small Fab	188-FPSS-1032-5/8	1	300	0
	188-FSCS-1032-5/8	4	88	0
	C10-28	1	12	0
	EL-PLUG-F	1	38	0
	EL-PLUG-M	1	38	0
	EL314-SJTOW	6	250	0
	SWA10A-100	1	0	0
	SWA10A-1100	1	6	0
	SWA10A-1200	1	10	0
	SWA10A-1300	1	10	0
	SWA10A-1400	1	10	0
	SWA10A-1800	1	14	0
	SWA10A-200	1	0	0
	SWA10A-300	1	14	0
	SWA10A-400	1	0	0
	SWA10A-500	1	0	0
	SWA10A-600	1	16	0
	SWA10A-700	2	32	0
	SWA6A-1900	6	88	0
	SWA6A-800B	1	0	0
	SWA6A-900B	1	0	0

Part Specifications

Specifications could not be found.

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor Approval Verification		
			QC / QA Coordinator Approval		
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
OTHER :					

**skyservice****Work Order Traveler**

Sky Service F.B.O. Inc.

10105 Ryan Avenue, Dorval, Quebec, H9P 1A2

TCCA AMO 53-89 / EASA 145.7142 / BDA AMO 385

WO #: MWO35000	Customer: Dart Aerospace Ltd.	Dept: NDT YUL	Reference: PO039037
Descr:	PN:	S/N:	Qty: 1
Make:	Model:	Reg:	A/C S/N:
TSN:	CSN:	TSO:	
Task: UNSCHEDULED			Sequence: 1

Work Required:

CARRY OUT NDT ON 1 ELECTRIC SWIVEL P/N# SWA10A-3-OH (6 PCS) , J/S# 171616

Action Taken:						Date:	Initial/Stamp:
MPI C/O IAW ASTM E-1444M-12 NO CRACK FOUND MAGBENCH S/N 208123 CAL DUE: 23-JUL-2018 POWDER 14A BATCH# MPO13600 CARRIER II BATCH# MPO20165						FEB 15 2018	
Description	Location	P/N	Qty	Batch	S/N Off	S/N On	

I certified that the maintenance described above has been performed in accordance with the applicable standard of airworthiness.

Signature:	ACA/SCA Stamp 	Date: FEB 15 2018
Name: RAFIK MELIKIAN		



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039037

Supplier: SKY002-VC
Skyservice
6120 Midfield Road
Mississauga
ON
L5P 1B1 Canada
Phone: 905-678-5636
Fax: 905-678-5841

PO No: PO039037
PO Date: 2/14/18
Due Date:
**Purchase Order
Revision:**
Revision Date:
Ship-To Contact: Baker, Diane
Phone: dbaker@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pymt Terms: Net 30
Freight Terms:
Special Comments:

Items										
Line Item	Job	Part	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	170434	D4464-041	Fuel Tank Assembly ISSUE P/O : _____ LIQUID PENETRANT INSPECTION AS PER QSI 038 OR LPI AS PER ASTM 1417 LEVEL 2	Firmed		1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
				Received		1 pcs	1 pcs	0 pcs	\$198.3333/pcs	\$0.00
Sub Total:						2	1	1		\$198.33
2	171068	D412-664-403	412 Stainless Steel Aft Crosstubes - High ISSUE P/O TO ACCUREN: _____	Firmed		1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
	171067			Firmed		1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
	171066			Firmed		1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
	171065			Firmed		1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
	171064			Firmed		1 pcs	0 pcs	1 pcs	\$198.3333/pcs	\$198.33
				Received		1 pcs	1 pcs	0 pcs	\$198.3333/pcs	\$0.00
				Received		1 pcs	1 pcs	0 pcs	\$198.3333/pcs	\$0.00
				Received		1 pcs	1 pcs	0 pcs	\$198.3333/pcs	\$0.00
				Received		1 pcs	1 pcs	0 pcs	\$198.3333/pcs	\$0.00
				Received		1 pcs	1 pcs	0 pcs	\$198.3333/pcs	\$0.00
Sub Total:						10	5	5		\$991.67
3	171616	SWA10A-3-OH	Electric Swivel 10,000 lb Safe Work Load (4,536 kg)	Firmed		1 pcs	0 pcs	1 pcs	\$178.00/pcs	\$178.00
Grand Total:										\$1,368.00

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER PO039037

Order Notes

A016 personnel qualification

A017 raw material identification (as applicable)

A022 Apical Processing

A024 process certifications

A026 certification of material conformance

A041 quality management system

A042 dart notification by supplier

A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 2/23/18 10:06 AM dart.baker.diane

Work Order 171616

Customer _____

Number of Wires 3Date 2018/03/29Serial Number M967-01

Number of Cycles	Load (Lbs.)	Action	Pass/Fail
1	10,000	Check for Conductivity against all wires.	PASS
1	10,000	Check all wires for grounding against swivel body.	PASS
1	5,000	Check for Conductivity against all wires.	PASS
1	5,000	Check all wires for grounding against swivel body.	PASS
1	2,500	Check for Conductivity against all wires.	PASS
1	2,500	Check all wires for grounding against swivel body.	PASS
1	0	Check for Conductivity against all wires.	PASS
1	0	Check all wires for grounding against swivel body.	PASS

Test Conducted By: AWW PATRY
TechnicianSignature: _____
Director of Quality Assurance



Electric Swivel
SWA10A

Work Order 171616

Customer HELICOPTER TRANSPORT SERVICES

Number of Wires 3

Date 2018/02/06

Serial Number M967-01

Number of Cycles	Load (Lbs.)	Action	Pass/Fail
1	10,000	Check for Conductivity against all wires.	PASS
1	10,000	Check all wires for grounding against swivel body.	PASS
1	5,000	Check for Conductivity against all wires.	PASS
1	5,000	Check all wires for grounding against swivel body.	PASS
1	2,500	Check for Conductivity against all wires.	PASS
1	2,500	Check all wires for grounding against swivel body.	PASS
1	0	Check for Conductivity against all wires.	PASS
1	0	Check all wires for grounding against swivel body.	PASS

Test Conducted By: ALAIN PATRY

Technician

Submit

Signature: 

Director of Quality Assurance

RETURN AUTHORIZATION



RA #:

RA176

Date:

January 24, 2018

Attention:

Jerry Sullivan

E-mail:

sullivanj@htshelicopters.com

From:

Jennifer Renwick

RETURN ADDRESS

☒ Hawkesbury	☐ Vista	☐ Eugene
Dart Aerospace Ltd	Dart Aerospace Ltd.	Dart Aerospace Ltd.
1270 Aberdeen Street	3030 Enterprise Court, Suite A	190 S. Danebo Avenue
Hawkesbury, ON K6A 1K7, CA	Vista, CA 92081-8347, US	Eugene, OR 97402, US
1-613-632-3336	1-760-724-5300	1-541-344-9953

SHIPPING

Courier: Customers Choice

Account #: Customers Account

COMMERCIAL INVOICE INFORMATION

Item #1		Item #2	
P/N:	C10-AR	P/N:	C10-AR
Description:	C-Series Remote Hook 10,000 lbs Lift Capacity	Description:	C-Series Remote Hook 10,000 lbs Lift Capacity
Qty:	1	Qty:	1
Flown:	Yes	Flown:	Yes
Customs Value USD:	\$5,800	Customs Value USD:	\$5,800
Batch / Serial #	M483-01 (Repair order # HTR-4491)	Batch / Serial #	1081104 (repair order # HTR-4496)
Item #3		Item #4	
P/N:	SWA10A-3	P/N:	0
Description:	Electric Swivel 10,000 lb Safe Work Load (4,536 Kg)	Description:	0
Qty:	1	Qty:	0
Flown:	Yes	Flown:	0
Customs Value USD:	\$3,500	Customs Value USD:	\$0
Batch / Serial #	M967-01 (Repair order HTR-4498)	Batch / Serial #	0
Item #5		Item #6	
P/N:	0	P/N:	0
Description:	0	Description:	0
Qty:	0	Qty:	0
Flown:	0	Flown:	0
Customs Value USD:	\$0	Customs Value USD:	\$0
Batch / Serial #	0	Batch / Serial #	0

ADDITIONAL RETURN AUTHORIZATION INFORMATION

- Print RA form, complete Part Disposition section and include a copy with the shipment.
- Ensure the RA number is referenced on all documents. Failure to do so may result in delivery refusal.
- Ensure the shipment is directed to the correct facility referenced above. Failure to do so will result in delays and additional shipping costs.
- Commercial invoice must include the following statement: "Parts are aircraft parts being returned to the manufacturer."
- International shipments require commercial invoice attached to the outside of the box.
- Where applicable, the original Release Certificate, STC's, Installation Instructions, Maintenance Manual Supplement, Flight Manual Supplement, packing slips and removable tag must accompany the shipment.
- Return authorization expires in 30 days. If no charge products were supplied, these will be invoiced upon expiration of the RA.
- Returned items will be fully inspected by Quality Control and credit will be issued for items deemed to be new, un-flown, traceable and to the current revision.
- A 15% minimum restocking fee applies, additional fees may apply upon receipt and inspection if items require rework or cannot be returned to stock
- Items should be adequately packaged to prevent shipping damage.
- For complete terms & conditions, visit www.dartaerospace.com

PART DISPOSITION (To be completed and returned by customer)

Reason for return: OVERHAUL EVALUATION